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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WATSON WU

Appeal 2008-002673
Application 10/034,390¹
Technology Center 2100

Decided:² May 28, 2009

Before LEE E. BARRETT, ST. JOHN COURTENAY III, and
THU A. DANG, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-30. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We reverse but enter a new ground of rejection.

¹ Filed January 3, 2002, titled "Method and System for Producing a Book from a Video Source."

² The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

The invention

The invention relates to a system, method, and program on a medium for automatically analyzing a video source to produce a book document. Video source data is decoded and a key frame is extracted to serve as the illustration part of the book. Text is extracted from the video data, for example, by optical character recognition of the caption data or by speech recognition, and used for the text part of the book.

The claims

Claim 1 is reproduced below:

1. A book producing system for producing a book, which consists of a text part and an illustration part, comprising:
 - a video-receiving module for receiving video source data;
 - a decoding module for decoding the video source data to obtain video data;
 - a text-extracting module for extracting the text part from the video data according to a production guide;
 - an illustration-extracting module for extracting a key frame from the video data according to the production guide, the key frame serving as the illustration part; and
 - a book-producing module for producing the book according to the extracted text part and illustration part.

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The references

Myers US 2002/0037104 A1 Mar. 28, 2002

Shingo Uchihashi et al., *Video Manga: Generating Semantically Meaningful Video Summaries*, Proc. of Seventh ACM Int'l Conf. on Multimedia (Part 1), Oct. 1999, pp. 383-392 ("Uchihashi").

The rejections

Claims 1-4, 6-14, 16-24, and 26-30 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Myers.

Claims 5, 15, and 25 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Myers and Uchihashi.

PRINCIPLES OF LAW

"[T]he best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. *Id.* In analyzing whether it would have been obvious to one of ordinary skill in the art to make a modification or combination, there does not have to be an express teaching, suggestion, or motivation (TSM) in a published article or issued patent. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007) ("The obviousness analysis cannot be confined by a formalistic conception of the words

teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents."). "Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of the reference." *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000).

The fact that the subject matter of a reference could be modified to produce the claimed subject matter still requires a suggestion or motivation. *See In re Mills*, 916 F.2d 680, 682 (Fed. Cir. 1990) ("While Mathis' apparatus may be capable of being modified to run the way Mills' apparatus is claimed, there must be a suggestion or motivation in the reference to do so."); *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) ("The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.").

ISSUE

Does Myers teach or suggest "an illustration-extracting module" and "a book-producing module" as recited in claim 1 and the corresponding limitations in claims 11 and 21?

FACTS

Myers describes "a method to portably detect and extract text information from captured imagery, thereby allowing new implementations for gathering, processing, and dissemination of information related to contents of captured imagery" (§ [0008]). Myers describes a text recognition

and extraction engine and it clearly has a "text-extracting module for extracting the text part from the video data," as recited in claim 1.

Myers describes seven embodiments. For example, in a first embodiment, the unit could be used as a portable language translator where text is detected and translated to a language native to the user (§ [0010]). In a second embodiment, the unit is used by a visually impaired or young person where the image is captured and the text within the image is detected and audibly spoken (§ [0011]). As another example, in a sixth embodiment, the unit could be deployed in a police vehicle for reading license plates, vehicle identification numbers (VINs) or drivers licenses and registrations where the text within the captured imagery is detected and used to provide information to the officer (§ [0015]).

Myers describes a seventh embodiment where the device is used as a portable inventory assistant to capture an image having text, such as a product on a shelf or the odometer on a returned rental car, and the text within the imagery is detected and used for inventory control (§ [0016]). As to this embodiment, Myers teaches that the text can be provided for "image and video indexing and archiving and inventory and shelf restocking control" (§ [0030]). This is described as follows:

Finally, the portable text recognition device 100 can also index and archive image and video, both for storage and identification, and as a means to increase the accuracy of targeted marketing programs. An example of this is to apply this technique on an internet photo server using the results to increase the accuracy that the pop up ads the user seeks is relevant.

¶ [0078].

CONTENTIONS

Appellant argues that Myers fails to teach "an illustration-extracting module" and "a book-producing module" as recited in claim 1 (Br. 5), and the corresponding limitations in claims 11 and 21.

The Examiner admits that Myers fails to teach "an illustration-extracting module" and a "book producing module for producing the book according to the extracted text part and illustration part," but concludes that

it would have been obvious to one of ordinary skill in the art at the time of the invention to have extracted an image—*illustration part*—from a video and index the image to produce an indexed photo album or book, using the extracted text, because Myers teaches using the extracted text to index images (0030, lines 11-29), thus, providing the benefit of organizing images, and text extracted from video, in order to quickly, and efficiently access those images.

Final Rej. 3; Ans. 3-4.

Appellant argues that Myers merely discloses an apparatus and method for recognizing text in an image sequence and fails to teach or suggest anything regarding a book producing system (Br. 6). It is argued that Myers' description of using text to increase the accuracy of targeted marketing programs and pop up ads in paragraph [0078] provides no suggestion to use extracted text to index images in a book producing system (*id.*).

Appellant argues that Myers' teaching of indexing images in no way teaches or suggests extracting a key frame from the video data according to

the production guide to produce a book as recited in claim 1 and it would be impermissible hindsight to incorporate the teachings of Myers with teachings not found in the utilized prior art (Br. 6-7).

The Examiner responds:

Regarding claims 1, 11, and 21, the Appellant notes there is no motivation to modify the apparatus, which uses text to index images into a book producing system (page 6, parag. 2). The Examiner disagrees, because Myers teaches producing books using text extracted from a video (0030, 0035-0036). Myers fails to explicitly teach extracting, and producing a book using an extracted illustration part. However, it would have been obvious to extract the illustration part, besides the text, to produce a book, because Myers teaches the indexing of images using the extracted text (0030, lines 11-29). This would provide the benefit of producing a book, which contains both images, and text describing/organizing such images to provide a quick, and efficient access of those images.

Ans. 9.

ANALYSIS

As to Appellant's argument that Myers fails to teach a book-producing module, the Examiner finds that "Myers teaches producing books using text extracted from a video (0030, 0035-0036)" (Ans. 9). Paragraphs [0035] and [0036] of Myers teach extracting text from video, which is not disputed. Paragraph [0030] of Myers states that the text can be provided for "image and video indexing and archiving and inventory and shelf restocking control," but the Examiner does not explain how "indexing and archiving" can be interpreted as producing a book. The Examiner has provided no definition of a "book" that is broad enough to read on mere indexing or any

logical reasoning of why indexing is a book. Based on the evidence before us, we find that Myers does not teach a book-producing module.

As to Appellant's argument that Myers fails to teach an illustration-extracting module, the Examiner concludes that it would have been obvious to extract illustrations to produce a book because Myers teaches indexing of images using the extracted text. Myers teaches that the text can be provided for "image and video indexing and archiving and inventory and shelf restocking control" (§ [0030]) and that "the portable text recognition device 100 can also index and archive image and video, both for storage and identification" (§ [0078]). It is not clear to us, and the Examiner does not explain, how this teaches extracting a key frame (or any frame) from a video to serve as the illustration part of a book (or other structure representative of the video). Myers appears to state that text could be recognized in a video for the purpose of indexing and archiving the video, not for the purpose of extracting key frames to serve as representative frames of the video.

CONCLUSION

Myers does not teach or suggest "an illustration-extracting module" and "a book-producing module" as recited in claim 1 and the corresponding limitations in claims 11 and 21. The rejection of claims 1-4, 6-14, 16-24, and 26-30 under § 103(a) over Myers is reversed.

The rejection of dependent claims 5, 15, and 25 over Myers and Uchihashi is reversed because the rejection of the independent claims has been reversed. We note that Uchihashi, as applied to dependent claims 5,

15, and 25, cures the deficiencies of Myers as to the independent claims. However, we have designated this a new ground of rejection *infra* because Uchihashi is not argued in the Appeal Brief and is not relied upon by the Examiner to meet the independent claims.

NEW GROUND OF REJECTION

Independent claims 1, 11, and 21 are rejected under 35 U.S.C. § 103(a) as unpatentable over Uchihashi and Myers. We leave it to the Examiner to address the patentability of the dependent claims.

Uchihashi discusses "methods for automatically creating pictorial video summaries that resemble comic books" (bolding omitted) (Abstract). Uchihashi discusses that "[w]hile any collection of video keyframes can be considered a summary, our goal is to produce a meaningful and concise representation of the video" (p. 383, right col.) by "choosing only the most salient images and efficiently packing them into a pictorial summary" (*id.*). Uchihashi discusses selecting and preparing keyframes (pp. 383-385), which implicitly requires a video-receiving module, a decoding module and an illustration-extracting module.

Uchihashi describes that a "two-dimensional layout is most appropriate for a printed synopsis, such as a 'comic book' format" (p. 385, right col.). Thus, Uchihashi teaches a book producing module. We note that the claims do not recite any specific book format.

Uchihashi describes that "[t]extual annotations enhance the quality of the video summary" (p. 388, right col.) and "video summarization methods

use text, typically from closed-caption subtitles or manual transcriptions" (*id.*). One of ordinary skill in the art would find this to teach or at least suggest a text-extracting module for extracting the text part (caption data) from the video. Uchihashi further describes that "the current state of the art of speech recognition is not robust enough to be practical at present" (p. 389, left col.). Thus, while Uchihashi does not use speech recognition to extract the text part, one of ordinary skill in the art would have been taught that speech recognition could be used to extract text if robustness was not critical or when the state of the art improves.

Because we explain why one of ordinary skill in the art would have recognized certain limitations to be present in Uchihashi, we enter the rejection under § 103(a) rather than § 102. Although Uchihashi alone is considered sufficient to establish obviousness of the subject matter of the independent claims, Myers is cited as evidence of another method of extracting text data from video data using optical character recognition.

CONCLUSION

The rejections of claims 1-30 are reversed.

A new ground of rejection is entered as to claims 1, 11, and 21.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of

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the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Requests for extensions of time are governed by 37 C.F.R. § 1.136(b).
See 37 C.F.R. § 41.50(f).

REVERSED - 37 C.F.R. § 41.50(b)

msc

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